

(19) World Intellectual Property Organization International Bureau



. I CONTROL DE CONTROL

(43) International Publication Date 21 October 2004 (21.10.2004)

PCT

(10) International Publication Number WO 2004/089308 A3

- (51) International Patent Classification⁷: C07D 401/02
- A61K 31/44,
- (21) International Application Number:

PCT/US2004/009845

- (22) International Filing Date: 31 March 2004 (31.03.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/460,085

4 April 2003 (04.04.2003) US

- (71) Applicant (for all designated States except US): MERCK & CO., INC. [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): COSFORD, Nicholas, D. P. [GB/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US). HUANG, Dehua [CN/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US). ROPPE, Jeffrey, R. [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US). SMITH, Nicholas, D. [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US). TEHRANI, Lida, R. [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US).

- (74) Common Representative: MERCK & CO., INC.; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

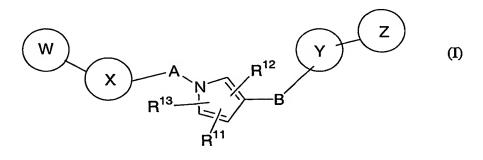
Published:

with international search report

(88) Date of publication of the international search report: 22 September 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DI-ARYL SUBSTITUTED PYRROLE MODULATORS OF METABOTROPIC GLUTAMATE RECEPTOR-5



(57) Abstract: Pyrrole compounds of Formula (I): and pharmaceutically acceptable salts thereof (where A, B, R¹¹, R¹², R¹³, W, X, Y and Z are as defined herein), which are substituted directly, or by a bridge, with i) a heteroaryl moiety containing N adjacent to the point of connection of the heteroaryl and ii) another heteroaryl or aryl ring, with at least one of the rings being further substituted with another ring, are mGluR5 modulators useful in the treatment of psychiatric and mood disorders such as, for example, schizophrenia, anxiety, depression, panic, and bipolar disorder, as well as in the treatment of pain, Parkinson's disease, cognitive dysfunction, epilepsy, circadian rhythm disorders, drug addiction, drug abuse, drug withdrawal, obesity and other diseases.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/09845

A. CLASSIFICATION OF SUBJECT MATTER IPC(7): A61K 31/44; CO7D 401/02 US CL: 546/268.1, 276.4; 548/517, 518; 514/336, 343 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S.: 546/268.1, 276.4; 548/517, 518; 514/336, 343	
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched	
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST, CAS ONLINE	
C. DOCUMENTS CONSIDERED TO BE RELEVANT	
Category * Citation of document, with indication, where app	propriate, of the relevant passages Relevant to claim No.
A, P WO 03/063576 A2 ((TULARIK INC.) 07 August 200	3 (07.08.2003).
Further documents are listed in the continuation of Box C.	See patent family annex.
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
26 May 2005 (26.05.2005) Name and mailing address of the ISA/US	Authorized officer ////////////////////////////////////
Mail Stop PCT, Atm: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Golam M. M. Shameeni, Ph.D. Telephone No. (571) 272-1600

Form PCT/ISA/210 (second sheet) (January 2004)